only ask that in the consideration of this subject the committees will be careful in every instance to see that they em-brace proper charges against the munici-pal enterprise; otherwise they are of no

in other communities show results equally advantageous to Richmond. The following statement shows the rates charged in Richmond, per are lamp per annum, and the rates charged in a number of other

tion of an electric light plant. Mr. Trafford's Report.

Mr. Trafford's Report.

I desire now to notice briefly the report of Mr. E. W. Trafford, a printed copy of which I have in my possession, in which he recommends the establishment of a municipal plant at Richmond. In my references to the statements 'n this report. I need hardly suggest that no criticism is intended of Mr. Trafford personally, but I discuss the report only as one of the facts in the situation which I must consider.

At the outset, Mr. Trafford assumes that all private electric plants are overcapitalized, The answer to this suggestion is that comparison can be made with existing municipal plants which are free from such embarrassments. These comparisons have been made, and the figures are given above. The assumption of certain conditions on pages two and three of the report, and the resulting figures, can be of no value. It is easy to assume facts from which any conclusion can be drawn.

On page 3 is the statement, "Public

to assume racts from which any conclusion can be drawn.

On page 3 is the statement, "Public necessities should be removed as far as possible from the realm of speculation." No facts are shown to indicate that electricity is a public necessity. To the contrary it is used by only a very small proportion of the community, whether it be supplied by municipal or private plants and is one of the most recent of modern hixuries. If all necessities must be under municipal control, then the city must go into the coal business, for coal is a necessity; in the clothing husiness, for clothing is a necessity; in the clothing husiness, for clothing is a necessity, and in many other lines of busiSUMERS FROM PUBLIC SERVICE cities of over 51,000 inhabitants in this

BATES PER R. W. HOUR TO CONSUMERS FROM PUBLIC SERVICE

Coal \$2.90-\$3.25.

Coal @ \$1.00. Coal \$1.35—\$1.60.

3 1-2c-7 1-2c Conl \$1.10-\$2.20.

2 1-2c—10c Coal @ \$2.90—water. 5c (little less.)

ness supplying products far more neces-sary than electric current. He answers the suggestion that municipality

He answers the suggestion that municipal plants have been failures with the statement that private plans have also been failures. This is not denied, but rother indicates the hazardous character of such enterprises and the care which should be taken before dobt is incurred to embark capital in such adventures. The fact that there have been numerous municipal and private failures gives no reason why Richmond should be added to the list.

to the list.

Considering now the recommendation in the report, we come first to the use of the Old Pump House, and the statements as to the amount of water power

3 th 12 th

of river, machine flos sec.

E.

00

flow loss and 70 p.

Water. Water 97 1-2 p.c. Coal, \$3.

Refuse wood from saw

Conl @ \$3.00. Conl @ \$2.57.

2-4c—15c 3 1-2c—10c 2 3-4c—10c 4c—17 1-2c 6c—12c 3c—20c

5c-12 1-2c 3c-11c 4.4c-11c 2-2c-12c 4 1-2c—11.60 —16c

5c-13c

2.6c—18c 5c—14c

1.70-15c 1 1-20-11c

and the stimular stages, and for four months no power at all.

With respect to the estimates as to the cost of underground conduits and cables, which is placed at \$46,577, I can only say that the underground conduits and cables of the present company cast \$200,000 in round numbers.

On page 13, it is stated that if the city desired to own its own conduits, \$9.415 should be added to the estimates there given. I referred this to an electric an in no way connected with the existing properties, but who has had a large experience in such work, and he, while admitting his inability to analyze the figures, owing to failure to give detail, says, "I venture to say the cost would be four times the amount mentioned by Mr. Trafford." Source of Power.

Coal @ \$2.20.

Coal @ \$1.00.

Coal @ \$1.50—\$2.50.

Coal @ \$1.50—\$1.80.

Water and coal @ \$2.6 Coal @ \$1.50—\$1.80.
Water and coal @ \$2.60.
Coal @ \$1.75.
Coal \$2.00 f. o. b.
Coal @ \$4.50—\$5.00.
Water and coal \$2.50.
Coal—\$1.25. Con! @ \$2.00.

Of course a complete analysis of these estimates or conclusions connot be made without the details and facts upon which they are based; but experience with hydraulic work in James River by the present companies has demonstrated that owing to freshets and other conditions. It work in variably costs much in excess of the set individual of the constitutions. The work has not been made in this report for freshets, which, in the case of the existing dam, woshed away a portion of it three times. No all wance here and for accidents, which constitute one of the great dangers in electrical service. No longer-than this morning there was an explosion in the condition of the danger of liability on account of accidents, which might have cost the company thousands of dollars. So hazarass is electrical employment, and so great the danger of liability on account of accidents, that all well-managed comanies provide for a large reserve against selectrical employment, and so great the danger of liability on account of accidents, that all well-managed comanies provide for a large reserve against selectrical employment, and so great the danger of liability on account of accidents, that all well-managed comanies provide for a large reserve against selectrical employment, and so great the danger of liability on account of accidents, that all well-managed comanies provide for a large reserve against selectrical employment, and so great the danger of liability on account of accidents, that all well-managed comanies provide for a large reserve against selectrical employment, and selectrical employment and the selectric account of the pump and the proportional cost of the plant for this service, but only the cost for the pumps and transmission lines. It would hardily be suggested that a plant of this character should be used for the purpose of pumping unless it is needed or would be profitable as an electric plant for municipal and general service. The city could better affort to by a countries of the plant and the service as the propert

vision for the cost of hydraulic work and underground system, according to the actual experience of existing companies; Second: Falls to make any provision for contingencies, freshets, accidents and other conditions with which such plants are necessarily confronted:

Third: Assumes that the city will do a commercial business only in the most profitable, central district, while due plant is to be established presumably for the benefit of all the people:

Fourth: Apparently assumes that the city is entitled to one-half of the entire flow of the river, while at the point of location of the old pump house it is entitled to one-fourth only, when reduces the basis of his estimates of available power by at least one-half:

Fifth: Assumes an existing rate of about nine cents per kilowatt hour, and fixes the fair rate at 6 2-3 cents per kilowatt hour, while the resent average rate for the entire terriory is 4.8 cents per kilowatt hour, while the resent average rate for the onthe terriory is 4.8 cents per kilowatt hour, and increase in the use of electricity, while the experience of other municipallities owning plants, already cited, shows that such is not the case. There are at present 1,650 consumers in Richmond and vicinity, of which 420 are residences, or about 1.8 per cent, We have already shown the small proportion of consumers for the municipal plants of England, and other points.

small proportion of consumers for the municipal plants of England, and other points.

Since current is now being furnished at a rate much lower than that which Mr. Trafford suggests as a fair rate, it can hardly be assumed that the use of current will be increased at his proposed rate. The result will be that the conmunity may be taxed in order that the community may be taxed in order that the configuration of the current, but rather in the cost of the current, but rather in the cost of wiring houses and making the changes which are necessary to its use, which cost is so great as practically to prohibit the use of the current by the great mass of the people certainly for a long time to come.

It is submitted, therefore:

First: That Richmond is receiving its municipal light at a rate cheaper than any city of its size in the United States;

Second: That light and current are being furnished to private consumers in this city at a rate cheaper than any city of its size in the country, whether furnished by municipal or private plants, and at a rate much less than what Mr. Trafford suggests as a rassonable rate.

Third: That the municipal light business is in its experimental stages, and is liable to be supplanted at any time by new methods, resulting in great loss to the plants, whether owned by cities or private companies.

Fourth: That the city is protected from any increased rate in the future by the immutable law of supply and demand, as well as by its power to impose restrictions and regulations upon existing com-

panies and to give franchises to competitive plants at any time it may wish;
Fithi: That the experiences of other cities have demonstrated that the cost of supplying light and current by municipal plants is far in excess of that at which they are now being supplied in Richmond, and it cannot be assumed that the experience of Richmond will vary to any great extent from the general experience of other cities.

Sixth: That Richmond occupies no position of special advantage over many other communities, for there are a number of municipal plants being operated by water where the flow is more constant than in James River, and, therefore, the water-power more available.

For these and other reasons, it would seem that conditions do not demand, and good business, judgment would not indicate, the establishment of a municipal plant at Richmond at this time.

Effect Upon Present and Future Investments. work and \$3,700 for the installation of hydraulic turbines, governors and shafting. I think it more than likely that this work would cost a total of \$150,000, instead of \$3,700, and I wish to call attention to the fact that Mr. Trafford. In making these estimates, has relied principally upon information obtained from contractors.

Investments.

making these estimates, has relied principally upon information obtained from contractors.

"Mr. Trafford's errors in hydraulies are illustrated by his statement on page 9 of his report, when he says:

"The reason why the present pump house cannot now secure the quantity of water covered by the above estimate is that on the south shore dams have been raised to about the level which is proposed for the city's dam, and the water flows over the rock-bed with little obstruction, whilst on the north shore, no such improvements have been made, and its passage is obstructed."

"This statement is obviously tinsound, for the dam, on the south shore is about the most perfect obstruction to the flow of the water that could be placed in the bed of the river, and its effect, if built higher than the dam on the north shore, would be to turn the water to the north shore and the pump house."

In this connection, Mr. Trafford's statement that the land-owner on each side of the river is entitled to one-half of the flow is a correct general principle. But where there is an island in the middle of the stream, the land-owner on each side is only entitled to one-half the flow between the island and the bank, which would give the city in this case only one-fourth of the entire flow of the river. This, according to Mr. Whitner's figures, would give only 1,000 horse-power at maximum stages, and for four months no power at all.

With respect to the estimates as to the cost of undergranted according to the

There is, however, another site the city (which, is the oblect we all have in view), is not to be measured by the price by the determination of the question at view), is not to be measured by the price by the determination of the question at the price of the current in the current in the price of the current in t

plant may result in a loss; it may result in no reduction of cost to the consumer; but the competing private corporation is taxed to help to meet the loss, and such burdensome conditions and regulation may be imposed by the competitor, the city, as to make profitable operation absolutely impossible.

I ask the members of this committee, and the people of Richmond to bring this question home to themselves; Would they be willing to invest in these corporations absolutely impossible.

I ask the members of this committee, and the people of Richmond to bring this question home to the continuations under such conditions? Would they, if they occupied the position of Mr. and Miss Gould, prefer to sell out now, and take such loss as they would have to sustain, or to send zood money after bad and invest additional millions with a prospect of municipal competition under such conditions?

Mr. and Miss Gould appreciate the support which the people of Richmond have given them under the conditions which have arisen since they have been cornected with these properties. They do not desire to loss the money which they have already invested, but prefer, if possible, to work out the result, through a place them upon a profitable gasis. Whether they shall continue to increase their investments in this community, is not a question of sentiment in any sense. It is purely a question of business, for the people of Richmond and for Mr. and Miss Gould. I think, however, that every member of these committees will agree with me that where people in their reasonable rates both to the city and to private consumers—have received no return for three years, upon investments of more than flyo millions of dollars in the community—they have the right to fask that they be given at least a reasonable opportunity to work out those investments, so long as they do not impose undue hardships upon the community or take unfair advantage of its poole. A community which would do less, would hardly ask, and certainly could not expect capital to come within i

FIGHTING SHIPS PASS IN REVIEW

Emperor and Thousands of His Japanese Subjects Filled With Enthugiasm.

(By Associated Press.)

TOKIO, Gctober 23.—The naval review to-day passed off without the slightest hitch. It was a most impressive sight, not, however, on account of the class and number of the ships, but as a conglomoration of fighting craft fresh from the war and crowned with victories of unprecedented magnitude.

Three hundred and eight warships, cluding three former Russian batt, eships and several other former Russian warand several other former Russian warships were drawn up in six lines. The
Emperor, on board the armored cruiser
Asama, passed along the front of the
first line which was headed by the battleship Shikishima, Admiral Togo's flagship. When the end of the line was
reached the cruiser Asama headed due
north and then in a westerly direction,
entering between the second and third
lines, and afterwards resumed her original position. During this manoeuvre,
Admiral Togo was at the Emperor's side.
The Emperor then received in audience The Emperor then received in audience on board the Asama, Admiral Noel and the captains of the British and American warships present.

The weather was fair, but it was misty the captains of the Asama, and American warships present.

on the water. Popular enthusiasm was aroused to the highest pitch. Besides the thousands who witnessed the naval the thousands who witnessed the navail pageant from all sorts of large and small vessels in the bay, the shore was densely covered with eager spectators. In a spectacle caused much joy and satisfaction among the Japanese.

Dead Easy.

The other ovening a man of the burgiar type stepped up to an old gentleman and, handing him a piece of paper, said; "Sir, would you be good enough to read me the writing on this piece of paper?"

The individual addressed consented, and, moving toward the rays of a convenient amp, read the L

"If you utter a cry or speak a single word I shall shoot you, Give me your watch and chain and purse at once and

watch and chain and purse at once and then pass on."

Completely taken off his guard, the gentleman handed over the articles asked for and waked off. A few steps brought him to a policeman and, relating his story, the pair proceeded in pursuit of the stranger, who was not yet out of sight

Next morning before the magistrate the

Next morning before the magistate the vagrant was called upon for an explanation.

"Your honor," he said, "I am not an educated man, and, therefore, can neither read nor write. Last evening I picked read nor write. Last evening I picked up a piece of paper, and, it striking me that it might be something of importance, I took it to the first person I niet and asked him to decipher it. The gentleman read it quietly to himself and then, without saying a word, handed me his watch, chain and purse, and walked off, without giving me time to recover from my surprise or to ask him what he meant."—London Tit-Bits.

Wifely Devotion.

Quibble (a struggling lawyer).—Buy an automobile? Great Caesar! Woman, would you drive me to the bankruptcy

court? Mrs. Quibble—Indeed I would, dear-I wouldn't expect you to hire a chauffeur, you know!—Puck.

Debt.

"What an immense debt the race owes

"Oh! immense."
"Oh! immense."
"Oh! ty-day I was reading that the cigar-shape has proved to be the best not only for airships but for submarine craft, as well."—Puck. If we can't be quite happy in this world, we can have a lot of things which other people think would make them happy.— Puck.

"Pa the teacher is goin' to show the class the effects of liquor-drinkin' on the human system."

"Ask the teacher if she's got plenty of liquor and if she requires any bell."

Houston Pust.

	Net Loss in Operating,	Interest.	Depreciation.	Other cost items.	Total,	. Cost Per Lar	np Per Year.
Belmont	\$ 3,642 31	\$ 1,197 92	\$ 940 60		\$ 5,780 88	32 c. p. \$20 59 50 c. p. 38 70	1,200 c. p. \$76 4
Braintree	2,772 75	4,250 45	8,793 46	\$245 55	11.062 20	25 c. p. 15 94	1,200 c. p. 74 6
Chicopee	9,980 54	5,446 05	5,497 27	60, 75	20,934 60		1,200 c. p. 98 1
Concord		8,252 48	3,324 42		7.075 18	25 c. p. 9 67	1,000 c. p. 41 7
Daners		2,148 32	1,881 12	44 49	8,700 10		1.200 o. p. 67 4
lingham	4.721 70	1,283 08	320 85	******	6,825 64	32 c. p. / 14 81	1,200 c. p. 56 6
Holyoke		14,051 31	20.117 01	62 18	37,460 76	16 c. p. 13 17	1,200 c. p. 97 1
Judson		2.196 79	1,658 43		6,442 87	25 c. p. 22 82	1,200 c. p. 106 05
Hull		6,830 92	5.131 52	116 26	12,449 83	25 c. p. 37 65	
Ipswich	3,487 01	1,281 80	1,551 64		6,320 45	25 c. p. 8 50	
Mansfield		1,821 88	2,183 78	******	5,659 52	32 c. p. 14 48	1,200 c. p. 53 35
Marblehead		4,532 50	4,107 90		10,174 70	25 C. D. 14 03	1,600 c. p. 50 38
	12 12 12 12 12 12 12 12 12 12 12 12 12 1	1751-520-530-50		10 4 to 4 to 5 to 5	- 11000 ta 20, 1202 to 1	25 c. p. 16 44	1,200 c. p. 57 54
Middleborough	1,688 41	3,771 35	2,449 26	70 49	4,971 69	25 c. p. 24 96	1,200 c. p. 56 41
Miller's Falls	6625 28	611 80	640 65	65 40	1,943 28	25 c. p. 20 90	1,500 c. p. 90 30
North Attleborough	1,244 61	3,269 72	3,084 02	41 69	7,686 94	32 c. p. 11 91	
		1 000 00	. 401 40		17 500 00	16 c. p. 11 18	1,200 c. p. 81 7
Peabody		4,293 00	2,681 18	******	17,568 83	32 c. p. 22 04	
Reading	1,368 63	3,323 00	2,539 08	86 62	7,622 33	Wester +	1,200 c, p. 53 34
Caunton	9,509 70	12,020 68	12,759 75		34,290 13	25 c. p. 8 22	1,200 c. p. 183 0
Vakefield	7,166 96	3,634 11	2,810 38	4 34	13,615 79	Keense Vienne	1,200 c. p. 83 31
Vellesley	10,680 24	802 44	643 24		12,125 92	25 c. p. 19 72	
Midnight lighting.	a 7,031 bs	1,850 47	2,074 81	191,28	11,058 54	25 c. p. 20 37	2,000 c. p. 109 6

This official statement shows that the average cost for 21 plants, for each arc light, under municipal ownership, is \$78.46 per annum. In only three cases is the annual cost per light less than in the city of Richmond, where the contract price is \$54.75; and in each of these three cases the lamps burn less hours than in Richmond.

While the reports under the Massachusetts law are more complete than those elsewhere, they do not include loss of taxes, which would be derived from a private plant; it may charge the cost of opening the sfreets or repairing the streets in electrical construction to the street department; but this is mere juggling with figures, for in the end the cost must be borne by those upon whom the ultimate burden falls in a private plant, which would aggregate for the plants named from \$20,000 to \$30,000 per annum, thus increasing the cost over the price in Richmond.

Cost in Massachusetts.

The following statement, taken from the report, shows not only the cost of lights per annum, but also the cost per lamp per hour, by the municipal plants of Massachusetts in 1804:

COST PER LAMP PER HOUR BY THE MUNICIPAL PLANTS OF MASSACHU-

COST PER LAMP PER HOUR BY THE MUNICIPAL PLANTS OF MASSACHU-SETTS IN 1904.

Municipality. No of house per polytic of National Polytic of National Polytic of National Polytics of National Pol	No. of nights per month.	Cost per lamp per year.	Cost per lamp per night.	Cost of lamp per hour.	Cost per c. p. per hour.	C. P. hours for 1 cent.
Belmont 5.6	20.3	\$ 75.44	24.22	4.33	.00360	278
Braintree 7.4	27.9	74.60	22.28	3.01	.00251	398
Chicopee 9.0	29.5	98.12	27.72	3.08	.00257	389
Concord 8.4	28.2	41.74	12.33	1.47	.00147	680
Danvers 6.0	24.2	67.46	23.23	3.87	.00823	309
Holyoke 10.8	30.5	97.15	26.54	2,46	.00205	488
Hingham 5.2	24.5	56.61	19.25	3.70	.00309	323
Hudson 5.6	27.0	106.08	32.73	5.84	.00487	205
Mansfield (4 months) 13.6	30,5	53,39	14.59	1.38	.00115	870
Marblehead 8.8	28.1	50,38	14.91	1.07	.00106	944
Middleborough (4.7	21.6	57.54	22.02	4.72	.00394	254
(7.1	24.7	99.41	33.54	4,73	00394	254
Miller's Falls 5.3	21.8	30.30	34.62	6.51	.00434	230
Peabody (10.3	23.5)	81.73	25.23	2.57	.00214	467
(9.3	30.5)	81.73	25.23	2.57	.00214	467
Reading 5.2	24.5	-53.34	18.14	3.49	.00291	344
Taunton 8.3	29.5	133.07	37,59	4.53	.00377	257
Wakefield 5.4	25.0	83.31	27.77	5.14	.00429	232
Westfield 10.6	30.5	109.62	29,95	2.83	.00141	710
Average 7.56	26.75	\$79.46			•••••	•••
Richmond, Va		\$54.75	=	1.367		 87

From this it will be seen that the cost , onstrated to be such a success, as-

From this it will be seen that the cost per lamp per hour varies from 1.38 cents, in the case of Mansfield to 6.58 cents in the case of Miller's Falls while in Richmond the cost of the service under the city's contract is only 1.36 cents.

When we turn to the cost of incandescent lighting, for private consumers, a comparison is necessarily difficult, owing to the variation in discounts and other conditions of the private contracts. An examination, however, of the Massachusetts report shows the following rates:

COST OF INCANDESCENT LAMPS I

	Price per	Discount for	Cost of las
Town.	kwt hr.	prompt payment	
Belmont	30	20 per cent.	At cost
Braintree	05	**********	20 to 250
Chicopee	1185		Free.
Concord	12		Free.
Danvers	/ .10		At cost.
Hingham	20	25 per cent.	25c.
Holyoke	25	20 to 60 p. c.	20c.
Hudson		25 per cent.	. 20c.
Hull	ACTION OF SOUTHWINES AND	20 to 40 p. c.	20c.
	4.000		Free.
Ipswich	100000000000000000000000000000000000000	6 2-3 to 60 p. c.	At cost
Mansfield	Price per	Discount for	Cost of las
	kwt. hr.	prompt payment	The State of the S
Town.	Strategic Commencer Commen		
Marblehead			ost plus 25 p.
M'ddleborough			
North Attleborough			At cost.
Peabody	13		
Reading	1 .15	10 per cent.	At cost.
Taunton	20	10 to 30 p. c.	Free.
Wakefield	. :20	10 per cent.	25 to 30c
Westfield			25c.
			CALL IN
Richmond, Va	025 to .10	*********	Free.

Cost of Current.

The average cost of current to private consumers in Richmond is less than five cents per kwt, hour, so that it will be cents per kwt, hour, so that it will be seen that the cost of current to private consumers under municipal control in Massachusetts, where such plants are as well managed perhaps as they can be in any place in the Union, is in many in-stances double the maximum Richmond rate, and four times the average Rich-

ond rate.

A recent investigation has disclosed the fact that if the lowns and cities owning and operating municipal plants in Mossarchusetts were to, receive their current from the Boston Edison Consequent at its from the Boston Edison Corepany at its existing contract rates for contracts of the years, it would result in a saving to these twenty-one towns of \$20,64.00 per annum; and if they were to receive their current at the rates of the Boston Edison Company under twenty-year contracts, it would result in an annual saving of \$15,559.87. To this annual loss of from \$20,600 to \$45,000, as compared with the Boston Edison Company rates, must be added the loss of taxes upon private be added the colles would collect, which would aggregate, according to conservative estimates, from \$20,000 to \$30,000 per annum.

\$30,000 per annum.
With these facts before them in the With these facts before them in the official reports, it is not surprising that where the proposition for the establishment of municipal plants has been brought up in Massachusetts towns and cities in the year 1904, it has been rejected.

t onstrated to be such a success as to justify the city of Richmond in spending from \$400,000 to \$500,000 in the establishment of a plant of this character, with the hope of reducing the cost of light to the city or to private consumers. At best, it is but an experiment. If in the case of a private corporation such experiments proves unsuccessful, the result is that the loss falls upon those who invested their monew with the hope of making a profit. If the municipal experiment proves a failure, the city may find

i lineare live	ores a minure, enc	cary integration
TE COMPAN	NICIPAL SERVIC	OND.
Price per	Discount for	Cost of lamp
kwt. hr.	prompt payment.	renewals.
	20 per cent.	At cost.
		20 to 25c.
1185		Free.
12		Free.
/ .16		At cost.
20		25c.
	20 to 60 p. c.	20c.
	25 per cent.	. 29c.
	20 to 40 p. c.	20c.
	¥	Free.
	6 2-3 to 60 p. c.	At cost.
		Cost of lamp
kwt. hr.		renewals.
15 to .:		
15		st plus 25 p, c.
15		At cost.
13		THE RESERVE AND THE RESERVE AND THE
, .15	10 per cent.	At cost.
20	10 to 30 p. c.	Free.

itself in a few years with a plant practically valueless, and yet its bonds outstanding to be paid by future taxation upon those who, in many instances, have derived absolutely no benefit from the enterprise. An illustration of this may be found in the case of Austin, Texas, where a municipal plant was established at a cost of \$500,000, and it proved such a failure that it was sold at a very small proportion of its cost, and the city has now to meet its bonds, which were issued for that purpose. Not alone the plant, as in the case of private companies, but the whole credit of the city is pledged for the indebtedness.

Conditions in Richmond.

country, that the present price paid by the city of Richmond for its street lighting is less per are light than the cost to municipalities owning their own plants. Taking the Massachusetts plants, for in-I regret that times does not permit a more extended analysis of this report. It is perhaps the most complete and accurate public document upon the subject obtainable in this country, and is worthy of the most careful investigation by any municipality proposing to establish an electric light piant.

I cannot undertake to trespass further upon the time of the committees in the analysis of these reports from other cities and sections. I realize how trying upon the patience is the analysis of flesser reports from other cities and a careful examination of the experience of other communities is exsential to its intelligent decision. Like all other questions of this character, reports from each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. In each of the twenty-one towns and cities operating municipal plants, excets the cost per arc light per annum. Hence the work is the light per annum. It is each of the exception of three exception of the exception o stance, the cost per arc light' per unnum-

CORPORATIONS.
No. of Cus-Range of tomers. Rates.

	tomers.
Duluth, Minn	5, ,00
Connellsville, Pa	4,037
Harrisburg, Pa	1.000
Chattanooga, Tenn	1,500
Birmingham, Ala	4.446
Kansas City Mo	6.000
Rochester, N. Y	5,000
Denver, Col	500
Memphis, Tenn	
Lowell, Mass	1,900
Grand Rapids	2,000
St. Louis, Mo	
Wilkesbarre, Pa	1.000 \$
Pittsburg, Pa	
Patterson, N. J	
New Bedford, Mass	Company of the
Trenton, N. J	2 700
Milwaukee, Wis	of the last
Baltimore, Md	6.000
Dayton, Ohio	1,500
St. Paul, Minn	
Utica, N. Y	3,000
Peoria, Ill	3.890
Louisville, Ky	
Indianapolis, Ind	
Albuquerque, N. Mexico	
	0.0
Average rate	ELECTRICAL PROPERTY.
Richmond, Va	
Average Richmond rate	

Average Richmond rate.......

Turning from the rates for are lights to the rates per kilowatt hour for current or light furnished to private consumers, the comparisons are no less favorable to this city. I have already shown that the cost per kilowatt hour for light and current furnished by municipal plants in Great Britain is considerably in excess of the cost per kilowatt hour in Richmond. I have also given the rates per kilowatt hour charged to private consumers by the municipal plants of Massachusetts which show that those rates range from 10 to 20 cents per kilowatt hour, while the rate to private consumers in Richmond, exclusive of railways, ranges from 2.5 to 10 cents—the average for the entire community being about 4.8 cents. These figures speak for themselves.

themselves.
When we compare the rates charged in When we compare the rates charged in Richmond with the rates charged by private companies in other similar communities the results are equally advantageous to the city. The following statement shows a comparison of the rates in Richmond with the rates charged in a number of other cities of over 51.000 inhabitants, with the number of customers in each case, and the source of conver

ments as to the amount of water power that can be developed and the cost of the hydraulic work. Mr. Trafford states frankly that it is impossible to determine definitely the exact character and extent of this work. But these facts lie at the foundation of the proposed enterprise, and an error here may determine the question of success or failure. I referred this report to Mr. W. C. Whitner, an hydraulic ensineer of recognized standing and character, who has made an exhaustive study of James River. RATES PER K. W. HOUR TO CONSUMERS FROM PUBLIC SERVICE CORPORATIONS.

	of Cus-	Range of	The Anthony Court of the
	tomers.	Rates.	Source of Power.
Duluth, Minn		2-4c-15c	Coal @ \$2.20.
Connellsville, Pa.		3 1-2c-10c	
Harrisburg, Pa	1 000	2 3-4c-10c	
Chattanooga, Tenn	1 500	4c-17 1-2c	Conl @ \$1.80.
Birmingham, Ala,	4 146	6c-12c	Coal.
Kansas City Mo	6,000	3c-20c	Coal @ \$1.50-\$1.80,
Rochester, N. Y.			Water and coal @ \$2.60.
Denver, Col	500	5c-12 1-2c	Coal @ \$1.75.
Memphis, Tenn		8c-11c	Coal \$2.00 f. o. b.
Lowell, Mass		4.4c-11c	Coal @ \$4.50-\$5.00.
Grand Rapids	2,000	2-2c-12c	Water and coal \$2.50.
St. Louis, Mo	2,000	30-12c	Coal-\$1,25.
Wilkesbarre, Pa,	Control of the Contro	4 1-2c-11.6c	Coal @ \$2.00.
Pittsburg, Pa	letti E	—16c	Coal,
Patterson, N. J		5c-13c	Con1 \$3.90-\$3,25.
New Bedford, Mass		2.6c-18c	Coal @ \$3.00.
Trenton, N. J	2.700 .	5c-14c	Coal @ \$2.57.
Milwaukee, Wis	3 4 3 1 20	5c-12c	
Baltimore, Md		40-10c	Coal @ \$3.00.
Dayton, Ohio		3c-14c	Coal @ \$2.30.
St. Paul, Minn		3c-15c	Water,
Utlea, N. Y	3.000	1.7c-15c	Water 97 1-2 p.c. Coal, \$3.
Peoria, Ill.	3,890	1 1-2c-11c	Coal @ \$1.00.
Louisville, Ky		3c-20c	Coal \$1.35—\$1.60.
Indianapolis, Ind		3 1-20-7 1-20	Coal \$1.10—\$2.20.
Albuquerque, N. Mexico		—12¢	Refuse wood from saw mill.
Average rate	6 d 175 t.	7.06c.	
Richmond, Va	1.650	2 1-2c-10c	Coal @ \$2.90-water.
· Average Richmond rate		5c (little less.	
The state of the s			ec

We have already seen that the per capita cost of current in Great Britair is 862-3 per cent, in excess of the per capita cost in New York, which according to the statement above given many time exceeds the cost of current in Richmond These figures speak for themselves, an exceeds the cost of current in Richmond. These figures speak for themselves, and it would seem that no comment was necossary. They demonstrate that the present cost of electric current to the city of, Richmond and to private consumers in this community, is far less than the cost of a similar service is the people of communities served by municipal plants, or by private plants in other sections. In other words that the city of Richmond and its people pay less today for their electric service than in any other city of its size in the United States, whether the service be furnished by municipal plants or private plants, and much less than the cost of a similar service furnished by the municipal plants of Great Britain, It is submitted that these conditions do not demand the municipal action proposed and do not justify a large increase of the city's already heavy debt, to make the experiment of municipal ownership and opera-

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J'From the above tables it will be seen that the power to be obtained at the old pump house, with an eighteen foot head and machinery showing an officiency of 70 per cent, as estimated in Mr. Trafford's report, varies from 3.718 to none, when half the flow of the river is taken, and from 1,002 to none when one-fourth the flow is taken. If the head is to remain as at present—i. a., twelve feet—then the power will be two-thirds of the amounts shown in the tables.

"Mr. Trafford's drawings shewing the plants by which it is proposed to make the improvements in the river described on pages 37, 28 and 31 of this report, are not available, but from the description given of the work, and judging from my own experience with the cost of such improvements in the James River, I have no idea that the proposed work can be done for the amounts specified on page 14.

Phone 1398.

Twelve-six Main St., of his report—i. e., \$7,000 for all river Newest Writing

5-Horse-power head and 70 p. c. rable 3-Horse-y IS feet head a smachinery. Table 4-Half fi Table O. C | Total | Tota

Since Mr. Trafford did not give the figures upon which his estimate of horse power was based, or the details of his estimated cost, analysis is difficult; but Mr. Whitner furnished me the following

cent

and 70 per

tatement which speaks for itself.

3